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ABSTRACT

This study analyzed symptom complaint patterns and perceived academic impairment in a sample of 189 university students diagnosed with various learning disorders (LD). Each participant underwent an extensive standardized assessment battery and was diagnosed according to the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders of the American Psychiatric Association. Participants also completed the Adult Learning Difficulties Assessment, a 123-item survey assessing perceived impairment in reading, writing, spelling, mathematics, listening, concentration, memory, organizational skills, sense of control, and anxiety. Analysis of variance revealed significant differences in level of perceived academic impairment between the LD groups, with the Attention Deficit Hyperactivity Disorder group reporting the most perceived impairment. Specific symptom complaint patterns for each learning disorder, along with limitations of the study and implications for future research, are discussed. (Author/SLD)

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Symptom Complaint Patterns in College Students with Learning Disabilities

By Steven T. Kane and Crystal Joy

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Symptom Complaint Patterns in College Students with Learning Disabilities

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Abstract

This study analyzed symptom complaint patterns and perceived academic impairment in a sample of 189 university students diagnosed with various learning disorders. Each participant underwent an extensive, standardized assessment battery and was diagnosed according to DSM-IV-TR standards. Participants also completed the Adult Learning Difficulties Assessment, a 123-item survey assessing perceived impairment in reading, writing, spelling, mathematics, listening, concentration, memory, organizational skills, sense of control and anxiety. Analysis of variance revealed significant differences in level of perceived academic impairment between the LD groups, with the ADHD group reporting the most perceived impairment. Specific symptom complaint patterns for each learning disorder, along with limitations of the study and implications for future research, are discussed.

According to a 1999 study by the American Council on Education, students with learning disorders are attending college in unprecedented numbers (Henderson, 1999). In fact, as many as four percent of college students and 10 percent of adults nationwide suffer from a learning disorder (American Psychiatric Association, 1994). Although a great deal of recent research has focused on the etiology of learning disorders, little research has been conducted exploring how symptom complaint patterns may prove predictive of a learning disability. This is important because analysis of symptom complaint patterns may help clinicians render better diagnoses. Moreover, a greater understanding of how perceived academic impairment varies by learning disability type can help practitioners target interventions at specific skill deficits.

Method

Two hundred twenty-nine students referred to a university-based learning disorders clinic were randomly assigned to one of three doctoral-level clinicians for assessment of a possible learning disorder. Participants underwent an extensive, standardized assessment battery and were diagnosed according to DSM-IV-TR standards. For the purposes of data analysis, 189 students were classified into one of six categories: Reading Disorders, Disorders of Written Expression, Math Disorders, Attention Deficit Hyperactivity Disorders (ADHD), Learning Disorders- Not Otherwise Specified (LD, NOS), and those diagnosed as "negative." Participants diagnosed with psychological disorders and disorders *other* than the above learning or attentional disorders were excluded from the present study.

Participants also completed the Adult Learning Difficulties Assessment (ALDA), a 123-item survey assessing perceived impairment and difficulties with reading, writing, spelling, mathematics, listening, concentration, memory, organizational skills, control and anxiety

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(Schmidt, 1997). Participants rated each item (e.g. "I don't retain much of what I read") on a 5-point Likert scale ranging from 5, "Agree Completely" to 1, "Disagree Completely."

Because of the often omnipresent and overarching nature of ADHD symptomology, it was hypothesized that this group would report the highest levels of perceived academic impairment (i.e., "symptom complaints").

Results

To facilitate data analysis, ALDA Profile Elevation scores were used in the analysis of variance. The Profile Elevation score is simply a grand mean summary score for all ALDA subscales for a respondent. Profile Elevation scores (as well as subscale scores) range from "1" to "5", with five reflecting higher self-perceived impairment.

ANOVA revealed significant differences in level of perceived academic impairment between the groups, with the ADHD group reporting the highest levels of perceived impairment (see tables 1 and 2). Specific symptom complaint patterns for each learning disability are also presented (see table 3).

Table 1

Mean ALDA Profile Elevation Scores, By Disability Type

Disability	N	Mean	SD
ADHD	19	3.42	.48
LD, NOS	26	3.01	.55
Negative Diagnosis	73	2.98	.63
Reading Disorder	36	2.89	.44
Disorder of Written Exp.	21	2.89	.56
Math Disorder	13	2.77	.60

Table 2

Analysis of Variance for Mean Profile Elevation Scores

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.754	5	.951	3.015	.012
Within Groups	57.393	182	.315		
Total	62.147	187			

Table 3

Specific Symptom Complaint Patterns; By Disability Type

(Range: 1-5; 5 = highest level of perceived impairment).

Attention Deficit Hyperactivity Disorders: (Profile elevation: 3.42)

1. General concentration/memory	4.11
2. Time management/procrastination	4.10
3. Task focus	4.06
4. Time issues in class	3.95
5. Reading processing	3.79

Learning Disorder, NOS: (Profile elevation: 3.01)

1. Time issues in class	3.79
2. Task focus	3.45
3. Anxiety	3.41
4. Reading processing	3.34
5. General time issues	3.33

Negative Diagnosis: (Profile elevation: 2.98)

1. Time management/procrastination	3.61
2. Time issues in class	3.60
3. Task focus	3.59
4. General concentration/memory	3.56
5. General time management	3.37

Reading Disorder:(Profile elevation: 2.89)

1. Time issues in class	3.73
2. Anxiety	3.36
3. Reading processing	3.34
4. Writing-spelling issues	3.31
5. General time management	3.29

Disorder of Written Expression: (Profile elevation: 2.89)

1. Writing-spelling issues	3.57
2. Time issues in class	3.50
3. Task focus	3.44
4. Reading processing	3.40
5. General reading	3.35

Math Disorder: (Profile elevation: 2.77)

1. Organization	3.81
2. Time issues in class	3.57
3. Anxiety	3.38
4. Math-symbolic processing	3.19
5. General math calculations	3.15

Discussion

As hypothesized, the ADHD group reported significantly higher levels of perceived academic impairment than the other disability groups. Also as expected, perceived academic impairment decreased as the learning disability narrowed in focus (i.e. math learning disorders were less broadly impairing than reading disorders).

The symptom complaint patterns presented in Table 3 are especially telling. Note that while those diagnosed "negative" were ranked third in terms of perceived academic impairment, their symptoms tell a story of procrastination and poor time management skills, and not LD-related symptoms per se. Also noteworthy, for example, are the high "organizational" and "anxiety" scores for those diagnosed with math learning disabilities. Interventions directed at increasing the organizational skills of, and reducing the anxiety experienced by, math learning disabled students could prove to be useful instructional strategies. Not only do these symptom complaint patterns provide important clues for interventional strategies per group, they also support the validity structure of the ALDA and thus its use as an individualized interventional "map" for each respondent.

This exploratory study has important limitations including the use of a relatively young college-age sample, lack of IQ/aptitude covariate analyses, and lack of correlational analysis of perceived academic impairment with actual Grade Point Average. Ongoing research by the authors has sought to remedy these limitations with larger sample sizes and broader data collection strategies. Future research may also include longitudinal analysis of perceived academic impairment with college graduation rates.

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